IC 735 No PA Bias Fault

By G8MNY (Update Aug 19)
(8 Bit ASCII graphics use code page 437 or 850, Terminal Font)

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SYMPTOMS

I have repaired 2 of these old rigs with this fault, both with very bad unreadable AF reports. Scoping the RF O/P when on a dummy load (sniffer near load) hard gaps can be seen in the RF low level O/P.

FIXING IT

PA Access is fairly straight forward, but a lot of screws!

1/ Remove power lead, remove top cover including the 4 LS anti rattle screws.
2/ Unscrew the 4 screws for PA unit, then with PA unit upside down & flat, the main unit can be balanced on its side on top, all leads should just about reach!
3/ Remove all the PA & Filter screening plate screws, & remove.
4/ Connect a Dummy load, PSU & Mic.
5/ On the PA board locate the screwed down Tab NPN transistor with white past & wire diode on top, nearest the middle & front of the PCB. On Tx it should +12V collector (Tab), 1.3V base (from PA Bias Pot), & +0.68V on emmitter (bias linked to PA & RF bases).
6/ If bias has failed, power off, unscrew the NPN & desolder from the 3 top side PCB pads. I found the fault was intermittant, as testing the NPN looked OK, but it would not work. Replace it with any 0.5A 12V Tab NPN gain >50.
7/ Put in a 2 tone test signal, & adjust PA Bias pot for perfect crossover on a scope.
8/ Disconenct leads & Carefully Reassemble. Then retest.

Also see tech bul "AF 2 Tone Test Osc Design"" IC 735 Battery Backup Mod", "PA instability in ICOM IC735" & "Autocaller with old Maplin kit"

Why don't U send an interesting bul?